

ART. IV.—A CASE OF CUTANEOUS DISEASE, CONFINED TO THE PALMAR SURFACE OF THE THUMB, TREATED BY SECTION OF FILAMENTS OF THE MEDIAN NERVE.

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IN a paper published in the *Hospital Gazette*, March 1, 1878, Dr. Edward Wigglesworth reports an interesting case of disease confined to the skin of one thumb, and consisting essentially in the eruption of successive crops of pustules, or bullæ, containing pus, which began in the cutis vera as minute points, on the face of the thumb or along the margin of the nail, sometimes, apparently, in its bed, then enlarged and coalesced; finally, unless interfered with in their course, forming one great blister filled with pus, and covered with a thick layer of epidermis. The pulp of the thumb would swell during the height of the attack, then shrink to less than its normal size, and lose its natural firmness, feeling soft and flabby, and was tender to deep pressure. Although this state of things had existed for four years, at the time of the intervention of which I am about to speak, no other parts than those mentioned had become invaded, the inflammation confining itself within the distribution of the median nerve, except for the bed of the nail, which is supplied by the radial. The nail itself had suffered materially in its nutrition.

Except for one other case closely resembling this, and also under Dr. W's care, we had neither of us met with anything of exactly this sort, and were led, rather by exclusion than by any direct evidence, to the diagnosis of nerve-lesion of some kind. Both patients had, in fact, suffered slight injuries, which Dr. W. regarded as having possibly set up irritative changes in the nerve-trunks, though the connection was not clear.

The injury, in the case now in hand, was on the back of the

thumb, *i. e.*, in the distribution of the radial nerve, and had left behind only a linear pliable scar.

Both cases appeared to be, from time to time, materially helped by frequent local applications of galvanism, and one had finally recovered entirely, though no longer at that time under treatment.

The present case, however, having continued without permanent improvement under every possible treatment, we finally decided, as a last resort, to cut the sensitive twigs of the median nerve supplying the affected region, and this was accordingly done, skillfully, under the carbolic spray, by Dr. H. H. A. Beach, on March 29th, 1878—a quarter of an inch of each digital branch of the median being excised. The excised portions were afterwards examined, but no evidences of disease found in them. The first time that the dressings were removed after the operation—at the end of twenty-four hours—two new minute spots of the unwelcome disease showed themselves, tauntingly, in the midst of the anæsthetic patch of skin; on the following day they had enlarged, and, presently, others also made their appearance, and coalesced, running, in short, their usual course. The patient, who had been taking cod liver oil, was given in addition, phosph. of iron, qui. and strychn., at Dr. Beach's suggestion. It was hoped that this first inflammation had been either really under way before, or that it was excited by irritations starting from the peripheral portion of the severed nerve—and this hope appeared to be well founded, for with the exception of a few spots which appeared within the first week or so after the operation, and quickly disappeared again, no further sign of the original trouble showed itself within the distribution of the median nerve. The wound healed sufficiently well, but left, as might have been expected, a dense, in part deeply-seated, scar. In portions of the area supplied by the radial nerve, some signs of irritation developed themselves after the operation, as I had feared would be the case. The patient suffered from occasional neuralgic pains along the back of the thumb, and this region, as well as the bed of the nail and the neighborhood of the scar, have been quite tender to pressure. Moreover, there had been a little suppuration under the nail, and, quite recently, a

minute pustule has made its appearance on the outside of the thumb near the nail. This tenderness, however, has always disappeared, in great part, when the thumb has been kept perfectly still by a light splint. The nail has, the patient thinks, grown more slowly since the operation than before; but, on the other hand, it has a healthier look, and the pulp of the thumb has also become firmer. In spite, therefore, of the signs of irritation, which manifest themselves in the distribution of the radial nerve, especially when the scar resulting from the operation is compressed, or is dragged upon by the action of the muscles, it looks at present as if the main disease were likely to be kept in abeyance, at least, till the peripheral end of the nerve shall have become regenerated.

The manner in which surgical interference in such case is of service, supposing it to prove so in fact, is still obscure, as is also the reason of the occasional favorable action of nerve sections in neuralgia.

In both classes of cases we, no doubt, are sometimes able to cut off a source of irritation to the suffering tissues, whether these be the skin or the nerve centres. Sometimes, however, nerve section seems to be of service where we do not cut off any source of irritation at all, strictly speaking, indeed where no such source of irritation exists, and for such cases as these we are obliged to assume that the operation acts by protecting the diseased nervous centres for a time from a set of excitations, physiological when regarded by themselves, but pathological when considered in relation to the irritable state of the central parts. In no other way, I think, can we explain the good effects claimed to attend the seemingly irrational treatment of some cases of blepharospasm by section of the supra-orbital nerve, where no source of irritation can be discovered in its distribution.

Again, in still other cases, those for instance of blepharospasm, which are said to be relieved by acu-pressure of the supra-orbital nerve, operative interference seems to exert an inhibitory action upon the diseased parts. What share in the favorable result is borne by each of these influences, it is often difficult to determine, though it would seem, theoretically, that we could sometimes decide as to one of them by ensuring

the diseased nervous centres complete rest, by mechanical or other means. This treatment is often attempted, to be sure, but, perhaps, not often carried out with such extreme precautions as seem necessary to ensure success in difficult cases.

Nearly three months have now elapsed since the operation, and the thumb can already be used somewhat without provoking trouble in the distribution of the median nerve, except at the very extremity of the thumb and along the nail, where a few spots have appeared at considerable intervals.\* It is noticeable, in this connection, that a deep prick with a needle or a maximal irritation with a single fine wire connected with an induction battery, will occasionally provoke sharp pain at isolated points, even in the middle of the palmar surface of the thumb, still more along its borders. This condition was first examined for carefully, and discovered about six weeks after the operation. The recent spots of disease do not appear, however, to correspond especially with these sensitive points. There is no longer any neuralgia in the thumb, but redness, swelling, and soreness is easily provoked by irritant applications, or by too long-continued use.

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\*The longest intervals of spontaneous remission have been five or six weeks, but for the past two years there has been none longer than a week.